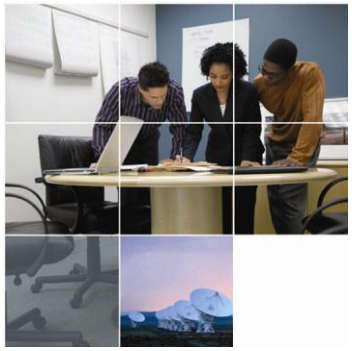
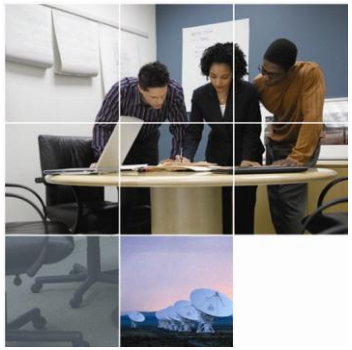


Federal Science Repository Service

Don Hagen, NTIS
Gail Hodge and Annette Olson, Ila

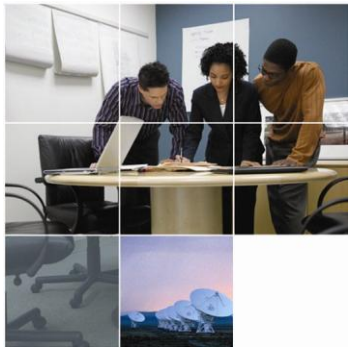
Presentation to CENDI

September 8, 2011



Outline

- The Federal Science Repository Service
- The National Technical Reports Library
- The NOAA/Deepwater Horizon Repository
- Main Features
- FSRS Architecture
- The “Core” Metadata
- Tour
- Benefits

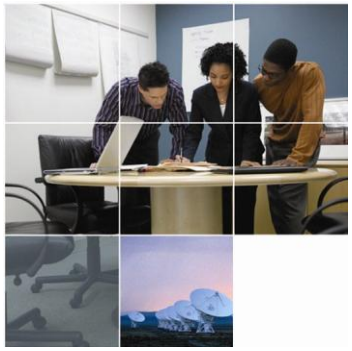


Mission

To promote progress, economic growth, and science and information by serving as the Federal Government's central means of making scientific, technical, engineering and business information *perpetually and widely available*.

- "Maintain a permanent archival repository and clearinghouse for the collection and dissemination of nonclassified scientific, technical, and engineering information." 15 USC 3710(d)(6)
- Collect, integrate and catalog scientific and technical information (STEI) from a variety of sources, foreign and domestic; and, disseminate this information to the public.
- Provide information management services to other federal agencies that help them interact with and better serve the information needs of their own constituencies.

Federal Science Repository Service



Federal Science Repository Service (FSRS)

- NTIS Joint Venture (JV) with Information International Associates (IIa)
- Help agencies easily develop repositories that:
  - Are durable against technology changes, yet flexible
  - Support preservation and long-term access
  - Are based on standards
  - Support open government initiatives
  - Promote interoperability
  - Promote further use of an agency's content
  - Can be tailored to an agency's needs

Federal Science Repository Service

The National Technical Reports Library

Developed by NTIS and IIa under contract:

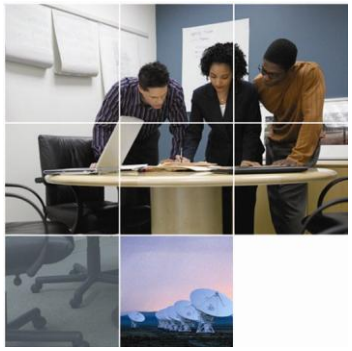
- NTRL Repository Version 1 (April 2009)
  - Currently serves 2.5 million records
  - Focus on federally funded technical reports
  - 65 subscribers (academic, government, corporate, and international)
  - Rich metadata
  - Full text access to 630,000 docs and growing
- Version 2 (R2) interface delivered April 2011 and tested
- Version 3 (R3) interface refinements and update processing being implemented this month, in preparation for testing in October
- Stronger functionality, cleaner user interface

Federal Science Repository Service

The NOAA Deepwater Horizon Repository

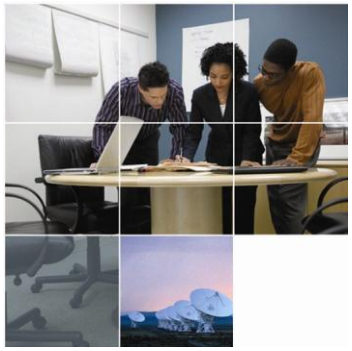
Developed by NTIS and IIa Joint Venture:

- Phase 1 to be completed October
  - Focus on NOAA's Deepwater Horizon and other content from 2 specific NOAA programs
  - 1000+ various resources (pdfs, images, video, audio)
  - Rich metadata
  - Storage of full text and media for ~ 60% of the resources; rest are outside links
  - All resources available to the public
- Phase 2 – schedule under discussion
  - Multiple NOAA programs and potentially other agencies
  - Ten thousand resources
  - Community-based access (internal-only, agency-level, and public)



FSRS Main Features

- Distributed-model architecture
- Core metadata mapped to standards
- Robust search tools, including Advanced Search and faceting
- Full-text and media display
- Links to content outside the repository
- Attribution and the maintenance of legal rights
- An agency-branded interface

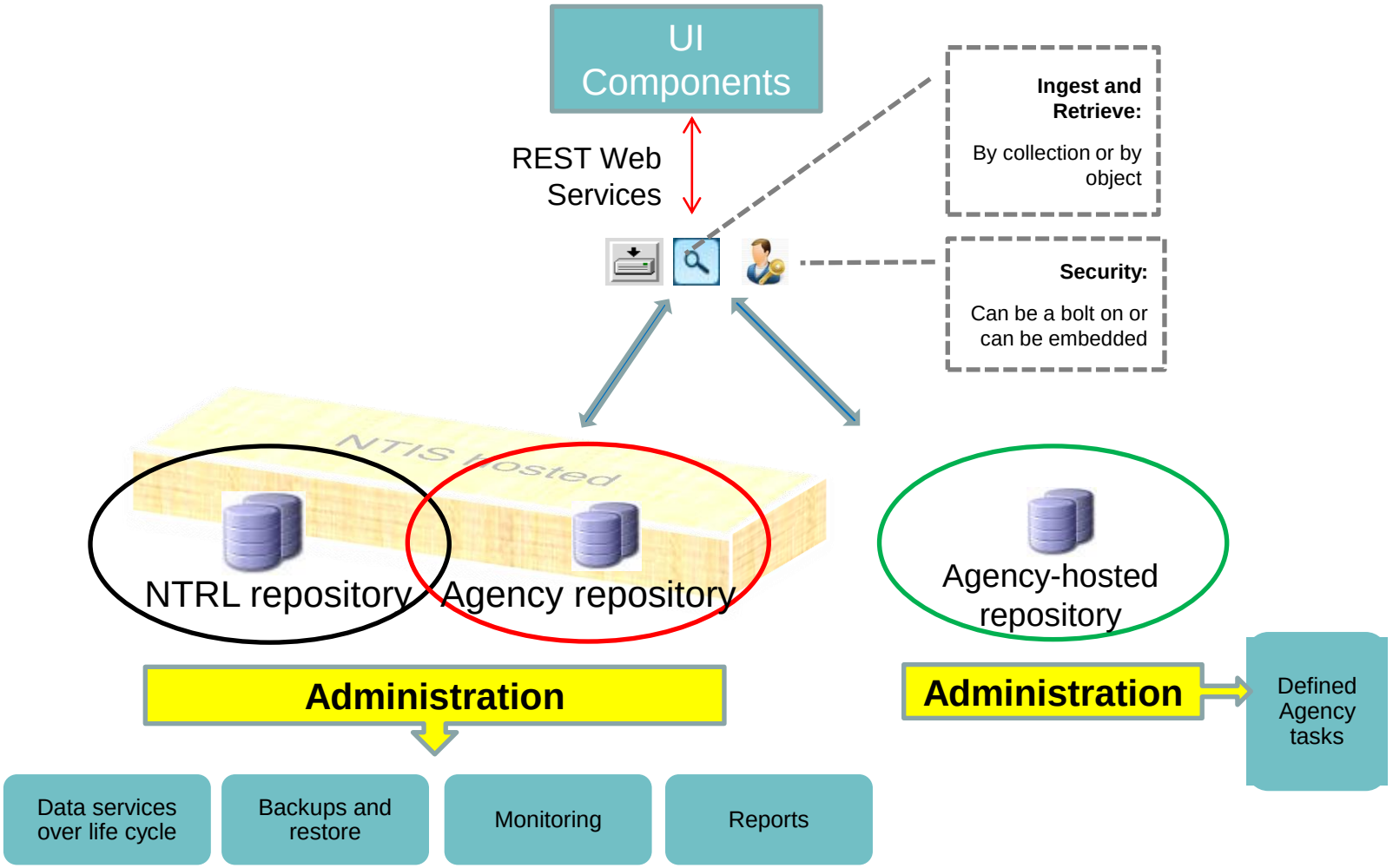


FSRS Architecture

- Based on Flexible Extensible Digital Object Repository Architecture (Fedora), and a Solr Framework
- Fedora and Solr are open source environments with an active community – FSRS will continue to monitor and incorporate improvements
- Main benefit - modular architecture, allowing:
  - Different object/data models
  - Flexible metadata relationships and extensions
  - Various front ends depending on agency requirements
  - Independent components for authentication, submission, searching, geosearch, visualization, etc.

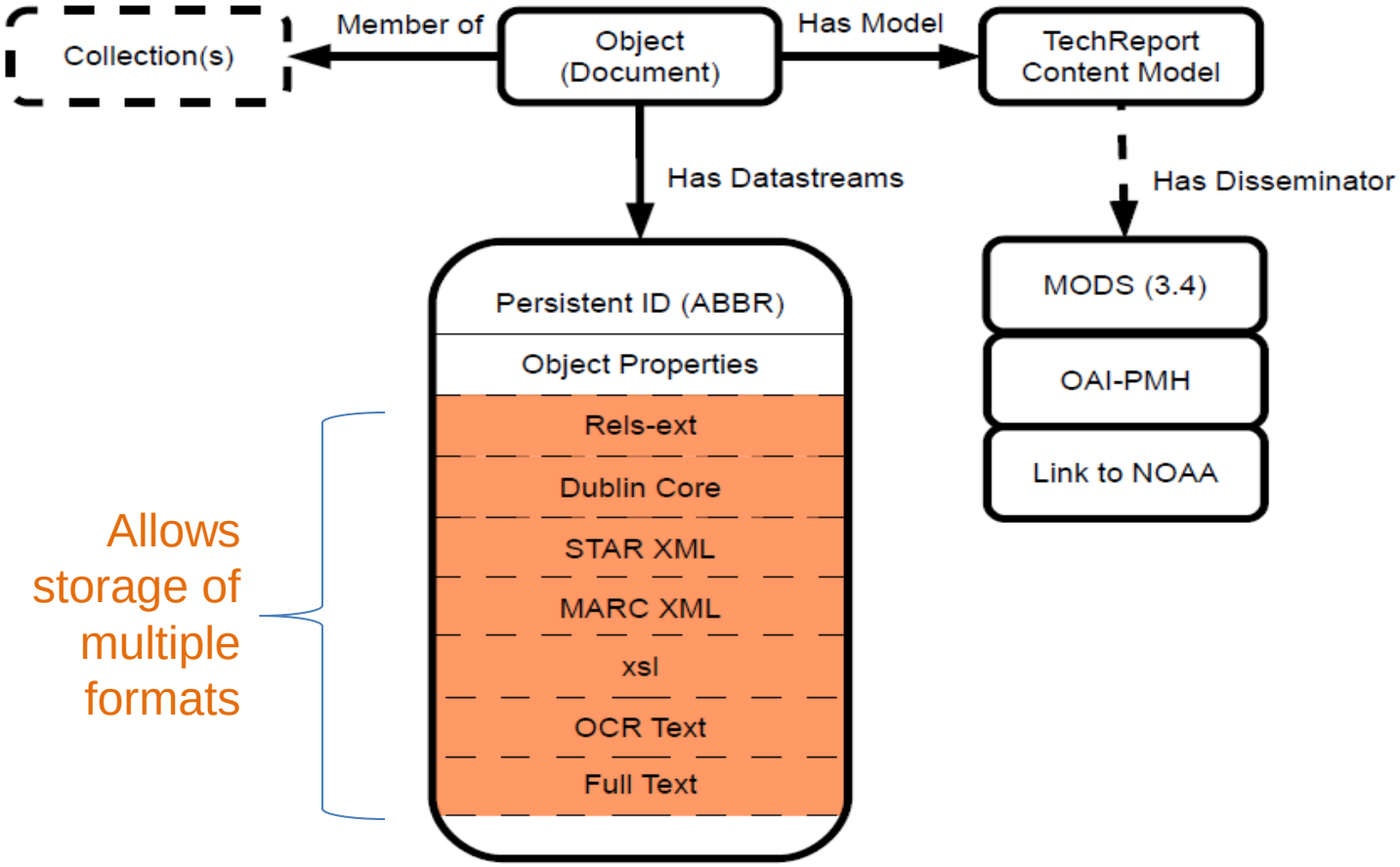
Federal Science Repository Service

Fedora 3.42/SOLR framework:



Federal Science Repository Service

Object Model for Documents



Federal Science Repository Service

The "Core" Metadata and Other Schemas

- "Core" set defined to support interoperability both within agencies and across agencies.
- Schema was based on research of standards for diverse media types: documents, images, video, ….
  - Mapped to multiple standards (MODs, MARC, DC, and technical standards).
  - Makes recommendations for fields that should be populated, especially for scientific and media-related information.
- The Core will support searches by Data.gov, Science.gov, and others.
- Along with the Core, an agency's original metadata schema can also be stored for display or later use.

The NTRL R3

Federal Science Repository Service

Welcome to the NTRL Repository Beta Version R3

The new NTRL Repository Beta Version offers a fast and easy Quick Search interface; improved navigation using faceted search (by Keyword, Source, Subject, Document Type, etc.); a variety of hypertext links (author name, descriptor, etc.); a powerful Advanced Search option; and more.

Subject coverage includes:

- Administration & Management
- Aeronautics & Aerodynamics
- Agriculture & Food
- Astronomy & Astrophysics Energy
- Atmospheric Sciences
- Behavior & Society
- Biomedical Technology & Human Factors Engineering
- Building Industry Technology
- Business & Economics
- Chemistry
- Civil Engineering
- Combustion, Engine & Propellant
- Communications
- Computers, Control & Info Theory
- Detection & Countermeasures
- Electrotechnology
- Energy
- Environmental Pollution & Control
- Government Inventions for Licensing
- Health Care
- Industrial & Mechanical Engineering
- Library & Information Sciences
- Manufacturing Technology
- Materials Sciences
- Mathematical Sciences
- Medicine & Biology
- Military Sciences
- Missile Technology
- Natural Resources
- Navigation
- Nuclear Science
- Ocean Sciences
- Ordnance
- Photography
- Physics
- Problem Solving Information
- Space Technology
- Transportation
- Urban & Regional Tech. Development

Questions or Comments?

Our team of technical information specialists provide directional, technical, and informational help desk support of the NTRL. Telephone assistance is available Monday through Friday, 8:30 a.m. - 5 p.m. (ET) by calling (703) 605-6585. Email assistance is available from NTRLtesters@ntis.gov

Welcome to the NTRL Repository Beta Version R3

Quick Search

SEARCH

Use Advanced Search to search by multiple criteria.

The new NTRL Repository Beta Version offers a fast and easy Quick Search interface; improved navigation using faceted search (by Keyword, Source, Subject, Document Type, etc.); a variety of hypertext links (author name, descriptor, etc.); a powerful Advanced Search option; and more.

Advanced Search

SEARCH » Clear Form

Full Text has full text available

Quick Search "hurricane forecasting"

Add Field

Published Date 1964 to 2011

NTIS Subject Category contains

Add Subject Remove Subject

Document Type is one of

- Bibliography
- Computer Data File
- Computer Model Simulation
- Conference Proceedings
- Computer Software
- Industry Standard

SEARCH » Clear Form

U.S. Department of Commerce

NTRL v2.0 National Technical Reports Library

National Technical Reports Library

HOME | QUICK SEARCH | ADV. SEARCH | RESULTS | ABOUT US | HELP

Advanced Search

SEARCH » Clear Form

Full Text has full text available

Author — J. L. Jones; A. B. Smith

AND — Abstract — Keyword sample

Add Field Delete Last Field

Published Date: 1964 to 2011

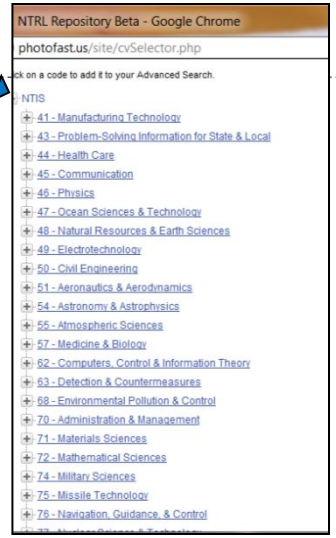
NTIS Subject Category: Add Subject | Remove Subject

Document Type: is one of

- Bibliography
- Computer Data File
- Computer Model Simulation
- Conference Proceedings
- Computer Software
- Industry Standard

SEARCH » Clear Form

Abstract dropdown:
- Quick Search
- Accession Number
- Author
- Keyword
- Title
- Abstract
- Corporate Author
- Report Number
- Contract Number
- Source Agency
- NTIS Issue Number
- Country of Publication



Search Results ((text:"climate change"))

Browse Results (2979 results found)

Sort results by Search Relevance Desc

Set records per page 10

Page 1 of 298

Result Pages: 1 2 3 4 5 6 next › last »

Refine

Source

Technical Information Center Oak Ridge Tennessee (772)
National Aeronautics and Space Administration (513)
Non Paid ADAS (321)
TIC Foreign Exchange Reports (150)
Environmental Protection Agency Office of Research and Development (139)
(Show More)

Keywords

Subject

55C - Meteorological Data Collection, Analysis, & Weather Forecasting (1515)
68A - Air Pollution & Control (1073)
55E - Physical Meteorology (393)
97R - Environmental Studies (325)
57H - Ecology (307)
(Show More)

Document Type

Technical Report (2327)
Conference Proceedings (268)
Analytic Daughter (245)
Journal Article (92)
Thesis (39)
(Show More)

Report Year

Title: Climate Change Resources: Glossary. EPA's State and Local Climate Change Program.
Source(s): Environmental Protection Agency General
NTIS Order Number: PB2008-108887
Media Count: 15 p
Date: 2008

Add to Saved Documents

Full text available
Buy this product in other Formats from NTIS

Title: Potential Impacts of Climate Change on U.S. Transportation.
Source(s): National Research Council Division of Earth Sciences
NTIS Order Number: PB2008-114614
Media Count: 296 p
Date: 2008

Add to Saved Documents

Full text available
Buy this product in other Formats from NTIS

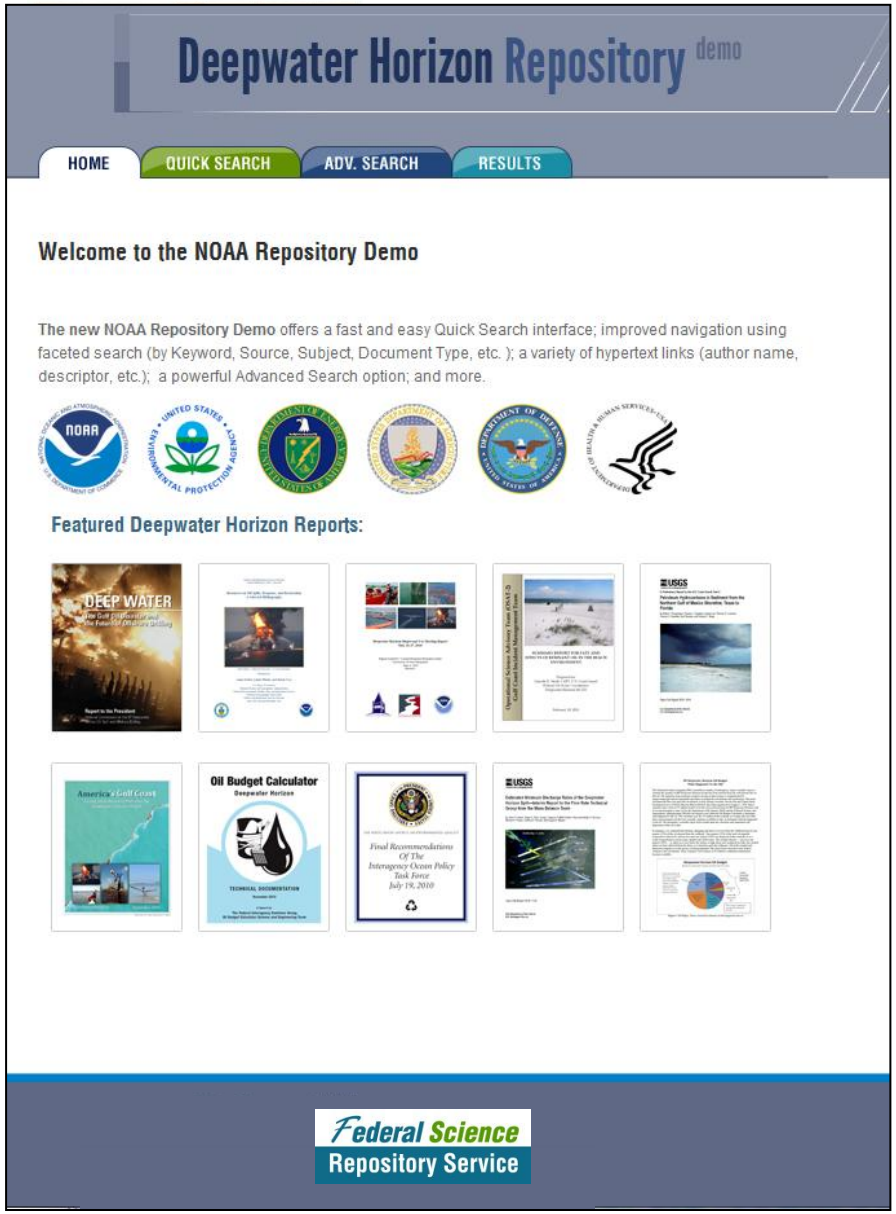
Title: Climate Change 2001: Impacts, Adaptation, and Vulnerability. Summary for Policymakers. A Report of Working Group II of the Intergovernmental Panel on Climate Change.
Source(s): Single Entry
NTIS Order Number: PB2001-107999
Media Count: 18 p
Date: 2001

Climate Change Effects on Stream and River Biological Indicators: A Preliminary Analysis.

Accession Number	PB2008-109860
Title	Climate Change Effects on Stream and River Biological Indicators: A Preliminary Analysis.
Publication Date	2008
Media Count	119p
Abstract	Climate change is projected to affect aquatic ecosystems through changes in water temperature, hydrological cycles, and degree days. These effects will manifest themselves through changes in community composition, phenology, number of reproductive cycles, evolutionary adaptations, and genetic selection. These changes also serve as indicators of climate change effects on ecosystems and could be used to document ecosystem condition. State and tribal water quality agencies use biological indicators to assess ecosystem condition as required by the Clean Water Act. These assessments rely on comparisons of reference and non-reference sites. Climate change, however, will affect organisms at both types of sites, unlike traditional stressors. Therefore, understanding how biological indicators respond to the effects of climate change, what novel indicators may be available to detect effects, how well current sampling schemes may detect climate-driven changes, and how likely it is that current sampling schemes will continue to detect impairment, are important issues in need of discussion. This report is meant to initiate this discussion by providing information on the potential effects of climate change on biological indicators, outlining initial strategies to modify assessment activities to account for climate change effects, and highlighting possible next steps.
Keywords	Biological indicators Streams Rivers Climate change Aquatic ecosystems Potential effects
Identifiers	Biological indicators Streams Rivers Climate change Aquatic ecosystems Potential effects
Source Agency	Environmental Protection Agency Office of Research and Development
NTIS Subject Category	68D - Water Pollution & Control 68G - Environmental Health & Safety 57H - Ecology 55C - Meteorological Data Collection, Analysis, & Weather Forecasting 98F - Fisheries & Aquaculture 70 - Administration & Management 48G - Hydrology & Limnology
Corporate Author	Environmental Protection Agency, Washington, DC. National Center for Environmental Assessment.
Report Number	EPA/600/R-07/085; EPA600R07085
Document Type	Technical Report
NTIS Issue Number	0817

Related Links

Link	Description
http://www.ntis.gov/search/product.aspx?ABBR=PB2008109860	Link to NTIS



NOAA – What's Different

Different audience, purpose, increased diversity of resources

1. Different metadata (their MARC mapped to Core)
2. Different search fields and filters
3. Different fields shown in results
4. Original MARC XML will be available.

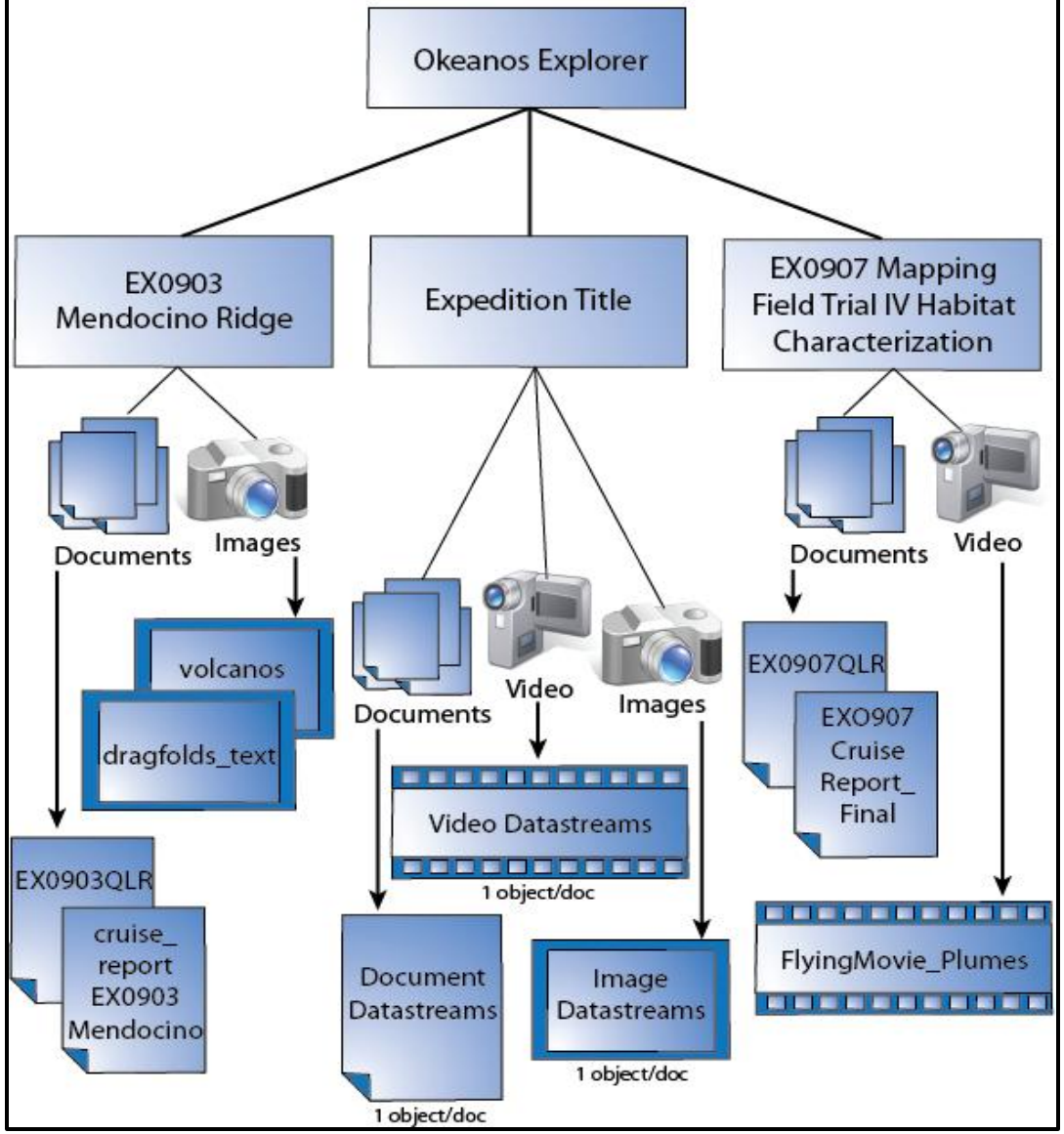
Upcoming FSRS Features

- Community-based access (from internal only to public)
- Browse capabilities
- Geospatial search
- Web 2.0 capabilities, such as RSS feeds
- Direct agency administrative capabilities, such as record editing and deletion
- Designating and linking related resources
- Support for collections

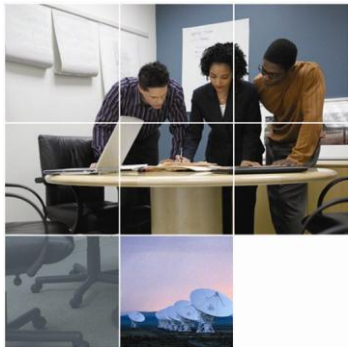
Diverse resources across programs!

Related Resources can be linked.

Collections Model



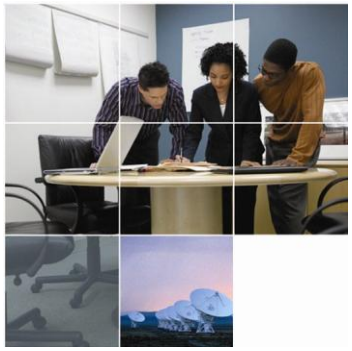
Federal Science Repository Service



Additional FSRS Services

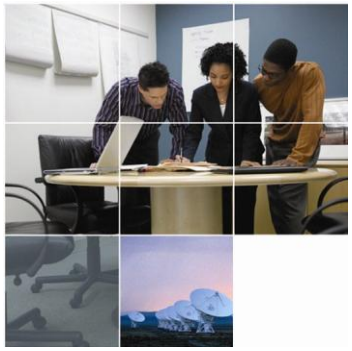
- Project management support
- Understanding of federal security and information management requirements
- Hosting services
- Support long-term preservation
- Other services on an as-needed basis include: cataloging, indexing, taxonomy development, legacy digitization, clearinghouse services, usability testing, web development

= MULTI-FUNCTIONAL SERVICE



It is All About Collaboration!

- Cost-sharing:
  - As agencies request new features and add-ons, they are available for entire service, so that all can benefit from a growing, evolving FSRS
  - Shared expertise
- Content-sharing:
  - Interoperability allows designated content to be shared with other, permitting agencies' repositories
  - Can receive content from other repositories, especially the NTRL
  - Cross-agency collections, such as DWH
  - Wider audiences



Why the Federal *Science* Repository Service?

- Resources are made more widely available to agency scientists, as well as designated resources to external research communities and the general public.
- Each agency in the FSRS can designate content to serve to Data.gov and Science.gov, as well as to others.
- Open content, cross-agency collections and linked resources all support e-Science -- the utilization of data from across networks to answer scientific questions not otherwise possible.

Federal Science Repository Service

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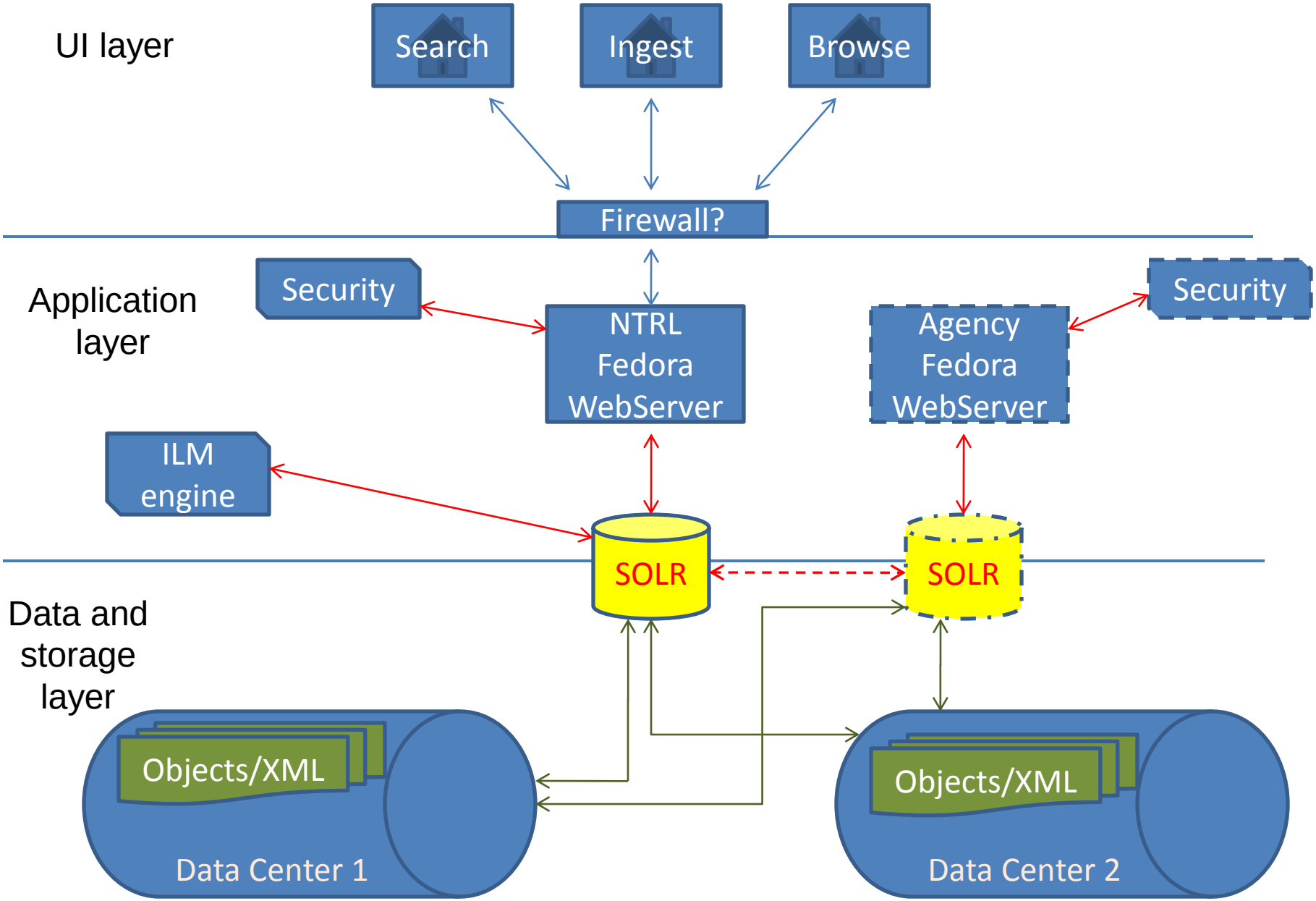
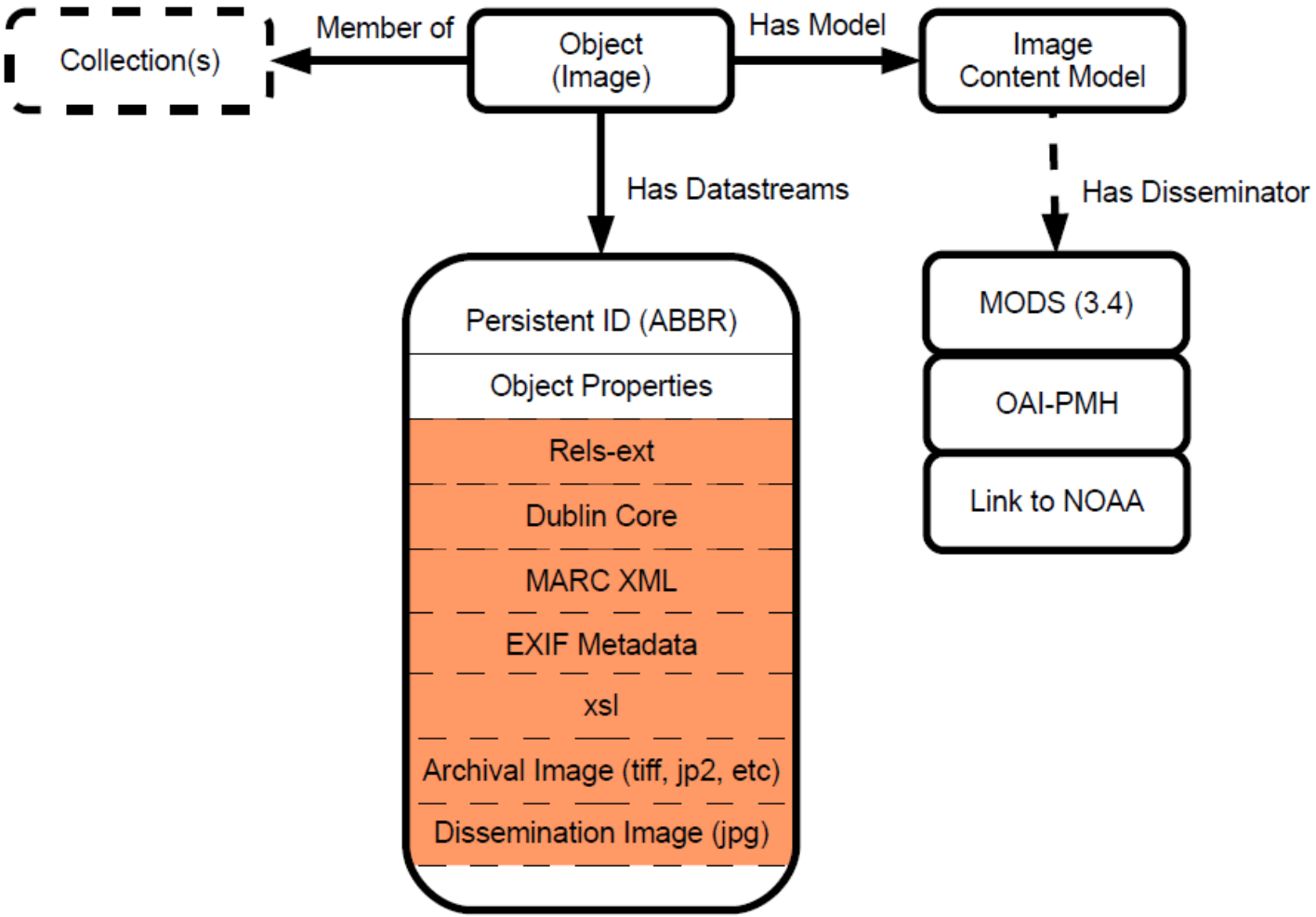
Federal Science Repository Service

Additional slides



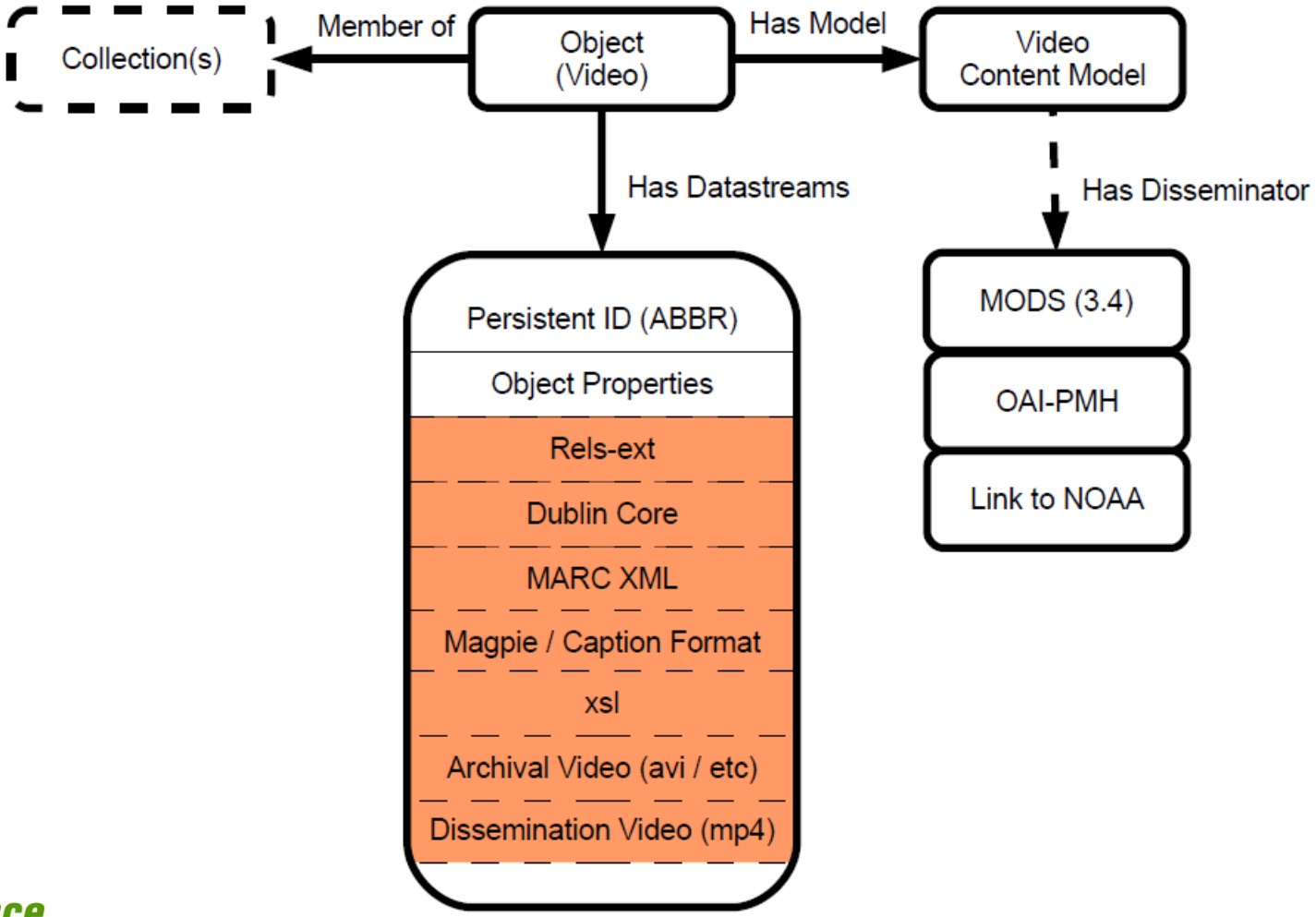
Federal Science Repository Service

Object Model for Images



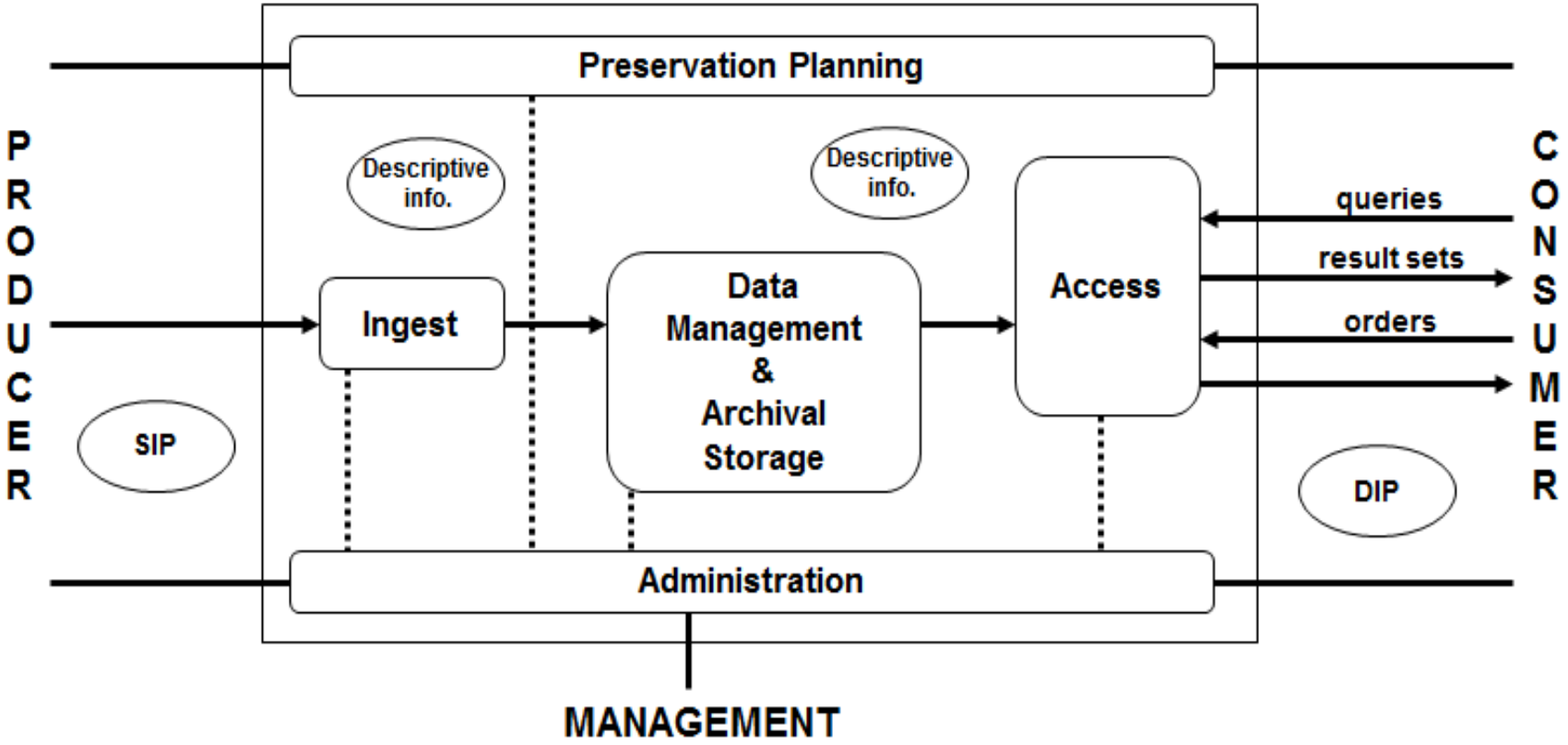
Federal Science Repository Service

Object Model for Video



Federal Science
Repository Service

Functional Model



Federal Science Repository Service